



Project Status Report: SOC Phase

2

CYBERTRoN DETECTION ENGINEERING & IDENTITY PERSISTENCE
VALIDATION

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1. Executive Summary

The objective of Phase 2 was to transition the **CyberTron** infrastructure from a passive logging state to an **Active Detection** environment. The primary focus was validating the SIEM's ability to detect unauthorized administrative changes, a key indicator of the "Persistence" tactic. By successfully monitoring local account modifications, the system now provides critical visibility into internal threats, mapping directly to the **MITRE ATT&CK** framework.

2. Implementation & Configuration

To establish a reliable identity-auditing baseline, the following engineering steps were taken:

- **Log Ingestion Pipeline:** Verified the end-to-end flow of Windows Security Logs to the **Wazuh Analysis Engine** via the encrypted Port 1514.
- **Audit Policy Verification:** Confirmed that the Windows workstation is correctly logging **Event ID 4720** (A user account was created) and **Event ID 4722** (A user account was enabled) within the Security channel for ingestion by the Wazuh Agent.
- **Service Stability:** Resolved initial API connectivity issues by optimizing the local_rules.xml configuration, ensuring the management dashboard remains synchronized with the backend detection engine.

3. Verification & Evidence of Detection

The "CyberTron" defense was tested using two critical attack simulations to ensure the "Manager" (Ubuntu) responds to the "Endpoint" (Windows).

Test Case A: Persistence (MITRE T1136.001/T1098)

- **Action:** Executed a local account creation command (net user CyberTron_Hacker /add).
- **Result:** The SIEM triggered **Rule 60109**.
- **Evidence:** The dashboard populated a Medium-severity alert identifying the specific username and the source process.

t	data.win.eventdata.targetUser	CyberTr0n_Hacker
t	data.win.eventdata.userAccountControl	%2080 %2082 %2084
t	data.win.eventdata.userParameters	%1793
t	data.win.eventdata.userWorks	%1793
t	data.win.system.channel	Security
t	data.win.system.computer	DESKTOP-0QPR8QG
t	data.win.system.eventID	4720
t	data.win.system.eventRecordID	8941
t	data.win.system.keywords	0x8020000000000000
t	data.win.system.level	0
t	data.win.system.message	"A user account was created."
t	rule.id	60109
#	rule.level	8
●	rule.mail	false
t	rule.mitre.id	T1098
t	rule.mitre.tactic	Persistence
t	rule.mitre.technique	Account Manipulation
<hr/>		
↙ timestamp	agent.name	rule.description
Feb 10, 2026 @ 13:43:27.1...	DESKTOP-0QPR8QG	User account enabled or created
	rule.level	rule.id
	8	60109

Figure 1: Detection of MITRE T1098 via Wazuh Analysis Engine.

🔍 4. Security Metrics Observed

Metric	Status	Observation
Alert Accuracy	100%	No false positives were observed during controlled identity persistence tests.
Detection Latency	Real-Time	Alerts appeared on the dashboard within seconds of user creation.

Metric	Status	Observation
Log Integrity	Verified	Successful correlation between Windows Event IDs and Wazuh Rules.

5. Next Steps: Phase 3 Goal

Goal: Adversary Simulation (Network Layer Defense)

With internal identity monitoring verified, the project will now move to an **External Threat Model**.

- **Objective:** Deploy a **Kali Linux** attack platform to perform network reconnaissance (Nmap) and service probing.
- **Key Outcome:** To evaluate the SIEM's ability to detect **Network Scanning (T1595)** and verify that the perimeter firewall/SIEM can identify and log the external Attacker IP.